Amendments

In the Claims

Please cancel claims 2-6 without prejudice or disclaimer.

Please add the following new claims:

-- 7. A frequency up-converter, comprising:

an acceptance module; and

a harmonic generation and extraction module (HGEM) coupled to said acceptance module.

8. The frequency up-converter of claim 7, further comprising:

a transmission module coupled to said HGEM.

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9. The frequency up-converter of claim 7, wherein said acceptance module receives an information signal.

10. The frequency up-converter of claim 7, wherein said HGEM comprises:

a switch, including:

a first port that receives a bias signal;

a second port that receives a control signal; and

a third port.

11. The frequency up-converter of claim 10, wherein said HGEM further comprises:

a filter, coupled to said switch.

12. The frequency up-converter of claim 10, wherein said filter is coupled to said first port of said switch.

13. The frequency up-converter of claim 10, wherein a harmonically rich signal is output from a port coupled to said first port of said switch.

14. The frequency up-converter of claim 10, wherein said third port is coupled to one of a reference and an information signal.

15. The frequency up-converter of claim 10, wherein said bias signal is a function of an information signal.

16. The frequency up-converter of claim 10, wherein said control signal is a function of an information signal.

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17. The frequency up-converter of claim 10, wherein at least one of said control signal and said bias signal is a function of at least one information signal.

18. The frequency up-converter of claim 8, wherein said transmission module includes at least one of an amplifier and an antenna.

19. A frequency up-converter, comprising:
a switch, including:
a first port that receives a bias signal;
a second port that receives a control signal; and
a third port;
a filter, coupled to said switch.

20. The frequency up-converter of claim 19, further comprising:
an amplifier, coupled to an output of said filter.

21. The frequency up-converter of claim 19, further comprising:
an antenna, coupled to said filter.

22. The frequency up-converter of claim 19, wherein said filter is coupled to said first port of said switch.

23. The frequency up-converter of claim 19, wherein a harmonically rich signal is output from a port coupled to said first port of said switch.

24. The frequency up-converter of claim 23, wherein at least one harmonic in said harmonically rich signal is at a desired frequency.

25. The frequency up-converter of claim 24, wherein said filter isolates said at least one harmonic.

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26. The frequency up-converter of claim 19, wherein said third port is coupled to one of a reference and an information signal.

27. The frequency up-converter of claim 19, wherein said bias signal is a function of an information signal.

28. The frequency up-converter of claim 19, wherein said control signal is a function of an information signal.

29. The frequency up-converter of claim 19, wherein at least one of said control signal and said bias signal is a function of at least one information signal.

30. A system, comprising:
a frequency up-converter, comprising:
a switch, including:
a first port that receives a bias signal;
a second port that receives a control signal; and
a third port;

a filter, coupled to said switch.

31. The system of claim 30, wherein said frequency up-converter further comprises: an amplifier, coupled to an output of said filter.

32. The system of claim 30, wherein said frequency up-converter further comprises: an antenna, coupled to said filter.

33. The system of claim 30, wherein said filter is coupled to said first port of said switch.

34. The system of claim 30, wherein a harmonically rich signal is output from a port coupled to said first port of said switch.

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35. The system of claim 34, wherein at least one harmonic in said harmonically rich signal is at a desired frequency.

36. The system of claim 35, wherein said filter isolates said at least one harmonic.

37. The system of claim 30, wherein said third port is coupled to one of a reference and an information signal.

38. The system of claim 30, wherein said bias signal is a function of an information signal.

39. The system of claim 30, wherein said control signal is a function of an information signal.

40. The system of claim 30, wherein at least one of said control signal and said bias signal is a function of at least one information signal. --